USCMS Engineer Status Report for May 2004

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1 Work Performed This Month

COBRA/Mantis development and testing OSCAR development/maintenance in - interfaces to G4 physics lists (PhysicsSim) - main oscar application and examples (OscarApplication) - user workspace (Workspace) - simulation data e.g. detector configuration, physics tables etc (Data) OSCAR developer support OSCAR release and release testing OSCAR robustness and performance testing in collaboration with - T. Wildish for production scale tests - PRS (P. Arce, S. Banerjee, T. Boccali, A. Nikitenko) for data quality monitoring (hit statistics, OVAL regression tests etc) - R. Yaari (G4) in OSCAR profiling OSCAR user support OSCAR WWW maintenance: http://cmsdoc.cern.ch/oscar/

see also

OSCAR release tables and release notes in http://cmsdoc.cern.ch/oscar/ OSCAR task list in http://cmsdoc.cern.ch/oscar/ OSCAR Savannah entries: https://savannah.cern.ch/projects/oscar/ OSCAR mail archive: https://wwwlistbox.cern.ch/earchi oscar-developers/ SPROM presentations: http://cmsdoc.cern.ch/swsi/agendas.html SPROM June CMS-week: http://agenda.cern.ch/age?a042288

OSCAR abstract and summary prepared and submitted to IEEE/NSS (abstract #1866) Title: "An Object-Oriented Simulation Program for CMS"

2 Status of Deliverables

work in progress for OSCAR production releases for Physics TDR simulations and PCP/DC05

3 Plans For Next Month

Plans for next month

trace/debug/test known OSCAR/G4 bugs and crashes finish 1st iteration of OSCAR/G4 performance studies (memory,CPU) prepare 2nd iteration (with new detector geometries, new magnetic field map - see OSCAR 2004 task list)

4 Longer Term Plans

Evaluate effort involved in migration to HepMC as generator interface (in collaboration with F. Moortgat and PRS experts) - prototype and test new simulation interfaces: from HepMC to G4 and from HepMC/G4 to final MC truth, test the latter in terms of completeness and navigability

Implement and test infrastructure for local magnetic field managers (in collaboration with N.Amapane) - evaluate possible performance gains vs impact on physics

Implement and test mechanisms for partial-event simulation for channels such as W-¿-nu(e-nu) - important for productions at the level of 50M events per channel

Write/update/improve documentation (in collaboration with V. Popov)

5 Resources Needed

no new resources needed at present

6 Links To Supporting Documentation

- http://cmsdoc.cern.ch/oscar/
- https://savannah.cern.ch/projects/oscar/
- https://wwwlistbox.cern.ch/earchive/cms-oscar-developers/
- http://cmsdoc.cern.ch/swsi/agendas.html
- http://agenda.cern.ch/age?a042288

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